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REMARKS

Claims 1-31 and 33-48 are pending in the application. By this Amendment claims 47 and 48 are added. Applicant respectfully requests reconsideration of this application in view of the foregoing amendments and following remarks.

Applicant thanks the Examiner for the helpful comments set forth in the Office Action, such as on pages 11 and 12 in the "Remarks" section. Applicant requests reconsideration based on the comments set forth below and the above amendments.

No new matter has been added by this Amendment. Support for the amendments to the claims may be found on page 10 of the application, for example.

A. The Claim Rejections based on Dai, Moore and Buyukkoc

The Office Action asserts that claims 11-15, 17, 19, 30-34, 36, 38-39 remain rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore. Further, claims 1-5, 7, 9-10, 22-24, 26, 28-29, 40-42, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No 6,189,043 by Buyukkoc et al. The above art rejections are addressed below collectively.

In helpful clarification of the pending rejection, the Examiner provides comments on page 12. That is, the Examiner asserts that the Dai reference does teach the limitations as claimed, and that Applicant has amended claims to explicitly state an active request component in the interrogate stage. The Examiner comments this is addressed with the new reference Buyukkoc. The Examiner asserts that in the claims still without the amendment, Dai still teaches a controller which monitors traffic over the network; and that interrogating without detail is interpreted as monitoring and the prior art meets the breadth of the limitation.

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Applicant respectfully traverses the above assertions and the proposed combination of Buyukkoc with the teachings of Dai and Moore. Applicant submits that the proposed combination of Buyukkoc with Dai and Moore under 35 U.S.C. §103 is unsupported by the applied art and fails to teach the claimed invention.

Claim 1 recites a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network, said multiple port unit comprising, plural network ports, each of said network ports being configured to couple the multiple port unit to a computer over a respective network link; plural communication serial ports, each of said communication serial ports being configured to couple the multiple port unit to a peripheral device; and a control unit configured to interrogate the network links and to communicatively couple said communication serial ports to a selected one of said network ports based on the interrogation of the network links. Claim 1 has been previously further amended to recite "the control unit being further configured to determine whether it is time to interrogate the network links."

The teachings of Dai were discussed in the prior Amendment. As described in the Abstract of Dai, Dai is directed to a method and apparatus for switching data packets in a data network, that includes "a local area network switch which implements packet segmentation and reassembly for cell-based switching on a backplane cell bus. A plurality of packet processing units are each coupled to a backplane cell bus wherein each packet processing unit hosts a plurality of local area network ports. Each packet processing unit is associated with a single packet buffer memory that is shared by the ports associated with the packet processing unit. Dai teaches the segmentation of local area network packets into fixed-size cells facilitates an efficient local area network switch which provides dedicated bandwidth for each of the ports associated with the switch.

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Claim 1 recites among other features, *a control unit configured to interrogate the network links and to communicatively couple said communication serial ports to a selected one of said network ports based on the interrogation of the network links*. Claim 1 further recites *the control unit being configured to determine whether it is time to interrogate the network links*. Based on at least the reasons set forth herein, Applicant respectfully traverses the rejection set forth in the Office Action and the basis thereof.

The Office Action appears to maintain the basis of the rejection set forth in the prior Office Action, in addition to relying on Buyukkoc. The Office Action asserts that Dai teaches a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network (Dai: col. 4, lines 38-43, Figure 1), said multiple port unit comprising plural network ports (Dai: col. 2, lines 25-33; col. 4, lines 38-43), each of said network ports being configured to couple the multiple port unit to a computer over a respective network link (Dai: col. 2, lines 25-33; col. 4, lines 38-43; where Ethernet ports are network ports); and a control unit configured to interrogate the network links and to communicatively couple said ports to a selected one of said network ports based on the interrogation of the network links (Dai: col. 2, lines 48-59).

The Office Action further asserts that Dai does not explicitly state serial ports. However, the Office Action asserts that Moore teaches plural communication serial ports (Moore: col. 3, lines 42-57), each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Moore: col. 3, lines 58-65). The Office Action also asserts that Moore further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

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The Office Action then concludes it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore in order to transmit and receive with a serial port and other devices (Moore: col. 2, lines 40-45). The Office Action further proposes modifying such combination with Buyukkoc, as discussed below.

Applicant respectfully traverses the above assertions of the Office Action and the proposed modification of Dai with the teachings of Moore. Applicant submits that Dai fails to teach the features of claim 1 including a control unit configured to interrogate the network links and to communicatively couple said communication serial ports to a selected one of said network ports based on the interrogation of the network links. Instead, Dai teaches routing controller 230 itself is a device connected to the cell bus 220; and that internally, it only takes the address information cells for searching its routing table for the destination port(s) and to learn the source address information for table maintenance within its routing table 235"(column 9, lines 22-27).

Applicant notes in particular that the Office Action alleges that Dai teaches a control unit configured to interrogate the network links and to communicatively couple said ports to a selected one of said network ports based on the interrogation of the network links (Dai: col. 2, lines 48-59). This assertion is traversed.

In such disclosure of Dai of column 2, Dai describes that: coupled to the cell bus is a switch packet routing controller which monitors cell traffic on the cell bus. Dai further teaches that for each packet that is received, the switch packet routing controller analyzes the packet to determine which ports, if any, the packet is to be output from. The switch packet routing controller propagates a control cell on the cell bus directing each of the packet processing units how to "route" each packet being assembled thereby. Dai further teaches that the switch packet

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routing controller also has associated therewith a routing table memory which collects information on received packets for creating a routing table associating each port with addresses to which it is in communication.

It is submitted that such teaching of Dai relates to a routing situation, as well as monitoring. In sharp contrast, the claimed invention relates to *interrogating* the network links and to communicatively *couple* said communication serial ports to a selected one of said network ports based on the interrogation of the network links. Dai fails to teach such features relating to the “interrogating” *and* the “coupling” in particular, and the interrelationship there between. Accordingly, it is respectfully submitted that even if it were obvious to somehow modify Dai with the serial ports of Moore, which Applicant does not admit to be, such modification would still fail to cure the deficiencies of Dai in teaching the claimed invention, as recited in claim 1.

The Office Action has responded to the above assertions set forth in Applicant’s prior response. In particular, on page 12, lines 11-14, the Office Action asserts Dai teaches coupling ports; and that although Dai does not explicitly teach serial ports, Dai does show coupling of ports to a high-speed network interface through a bridging controller (Dai: col. 2, lines 60-67). The Office Action asserts the data received is coupled to an outgoing port through the bus which is controlled by the switch packet routing controller.

Applicant submits that such assertions fail to support the rejection under 35 U.S.C. §103. To explain, as discussed above, the Office Action relies on Dai’s cell bus and the switch packet routing controller which monitors cell traffic on the cell bus to (in part) allegedly teach the claimed invention. On page 12, lines 11-14, the Office Action (referring to Dai’s teaching in col. 2, lines 60-67) appears to assert that Dai teaches “coupling ports” in the context of the processing of Dai’s cell bus. However, Dai’s teaching in col. 2, lines 60-67, talks that the Ethernet

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workgroup switch also includes a high-speed network interface. Dai describes the high-speed network interface is *coupled* to a high-speed internal bus, such as a PCI bus, which is in communication with the *cell bus* through a bus bridging controller. Such teaching fails to relate to the cell bus processing as alleged in the Office Action. Rather, in terms of a “coupling” such teaching of Dai says little more than: the high-speed network interface is coupled to a high-speed internal bus.

In short, it appears that the Office Action is attempting to collectively use Dai’s teachings of the cell bus with Dai’s teaching at column 2, line 64 regarding coupling. Applicant respectfully submits that such collective use of the teachings of Dai is unclear. Further, such teachings of Dai clearly fall short of the claimed invention including - the control unit *interrogating* the network links and to communicatively *couple* said communication serial ports to a selected one of said network ports based on the interrogation of the network links.

Accordingly, Applicant maintains that Dai fails to teach the above noted features relating to the “interrogating” *and* the “coupling” in particular, even if modified by Moore, which it is not admitted to be obvious. The Office Action does not appear to reflect that claim 1 does not simply recite to couple ports, i.e., claim 1 recites “to communicatively couple said communication serial ports to a selected one of said network ports”. That is, such coupling is done based on the recited interrogation. Dai simply does not teach such specifics and the interrelationship between the coupling and the interrogation; and Dai’s teaching at col. 2, line 64, is seen as little more than the known concept that ports may be coupled.

In the Office Action, the teachings of Buyukkoc are relied upon. The Office Action asserts that the Buyukkoc reference teaches a control unit being further configured to determine whether it is time to interrogate the network links (Buyukkoc; col. 7, lines 38-67; periodically

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broadcasts); and that Buyukkoc further teaches the invention provides a dynamic technique for assigning and reassigning servers based on activity to direct traffic (Buyukkoc: col. 1, lines 30-37; col. 2, lines 1-4). The Office Action concludes it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore and configuring a control unit when to interrogate the links as taught by Buyukkoc in order to transmit and receive with a serial port and other devices in a dynamically changing environment.

Thus, regarding Buyukkoc, the Office Action asserts it would have been obvious to create the multiple port packet switch as taught by Dai while ... configuring a control unit when to interrogate the links as taught by Buyukkoc. In addition to Applicant's traversal above, Applicant further traverses such assertions regarding Buyukkoc.

On page 5, the Office Action relies upon Dai's teachings in col. 2, lines 48-59. Therein, Dai talks to the cell bus, and the switch packet routing controller which monitors cell traffic on the cell bus. Dai teaches that for each packet that is received, the switch packet routing controller analyzes the packet to determine which ports, if any, the packet is to be output from. Dai describes the switch packet routing controller propagates a control cell on the cell bus directing each of the packet processing units how to "route" each packet being assembled thereby. The switch packet routing controller also has associated therewith a routing table memory which collects information on received packets for creating a routing table associating each port with addresses to which it is in communication.

Applicant respectfully requests reconsideration of the proposed combination of such teaching with Buyukkoc. Buyukkoc is directed to dynamic cache replication in a internet environment through routers and servers utilizing a reverse tree generation. Buyukkoc teaches in

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col. 1, lines 41-61, that in one application of the Buyukkoc invention, a network includes a plurality of regions, with each region including a router, a server, and a plurality of user terminals. The router in each region couples the server and the plurality of user terminals to the network.

Buyukkoc further describes that in accordance with the Buyukkoc invention, the distribution of replica caches of information is dynamically optimized among the regions of the network, based upon the changing usage patterns. Buyukkoc further teaches a processor, which can be in the router or associated with the router, transmits a monitor request message to other routers in other regions of the network, requesting them to monitor all service requests in their respective regions, which are directed to the primary copy in the first server. In response to this, the processor receives monitor response messages from the other routers, providing a count of service requests being directed to the first server.

The Office Action refers to Buyukkoc in col. 7, lines 38-67. Therein, Buyukkoc teaches that a router "a" handles 1000 requests per hour for a ten-megabyte file stored in primary cache "P" as part of the data set on server 40. Buyukkoc describes that in the Buyukkoc invention, reverse tree generation is used to dynamically reorganize the caches in the network in response to usage patterns. Router "a" periodically broadcasts a monitoring request to the other routers b, c, d, e, f, g, and h to begin monitoring each of the network links that it handles for a period, e.g. of one hour. FIG. 7A shows the existing router table 334 for the network of FIG. 5.

Accordingly, the teachings of Buyukkoc are fundamentally different than Dai's teachings in col. 2, lines 48-59, i.e., such that it would not have been obvious to somehow combine such art to teach the claimed invention. Further, Applicant respectfully submits that it is fully unclear how Buyukkoc (relating to dynamic cache replication) would even be combined with Dai's cell

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bus related teachings. Rather, Applicant respectfully submits that the Office Action appears to be picking and choosing amongst the unrelated teachings of Dai and Buyukkoc in a manner that would not have been obvious to the one of skill in the art.

For at least the foregoing reasons, Applicant respectfully submits that claim 1 defines patentable subject matter. Further, it is submitted that independent claims 11, 22, 30, and 40 define patentable subject matter for reasons similar to those set forth above with respect to independent claim 1.

Applicant submits the independent claims are allowable. Further, the various dependent claims define patentable subject matter based on their various dependencies on the independent claims, as well as the additional features such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

B. The Further 35 U.S.C. §103 Rejections

The Office Action sets forth various further 35 U.S.C. §103 rejections. In particular, the Office Action asserts that claims 16 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 5,761,084 by Edwards. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No 6,189,043 by Buyukkoc et al in further view of U.S. Patent No. 5,761,084 by Edwards. Claims 18 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 4,937,817 by Lin. Claims 8, 27, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent

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No 6,189,043 by Buyukkoc et al in further view of U.S. Patent No. 4,937,817 by Lin. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 5,680,324 by Schweitzer et al.

The Office Action acknowledges that the proposed combination of Dai, Moore and Buyukkoc in the Office Action fail to teach various features of such dependent claims. For example, the Office Action asserts that such applied art do not explicitly state the use of two redundant power supplies. The Office Action asserts that such applied art do not explicitly state the use of the Packet Internet Groper when allegedly interrogating links. The Office Action further asserts that the such applied art do not explicit state intelligent devices as peripherals.

However, it is respectfully submitted that the secondary references, which the Office Action proposes to combine with Dai and Moore and Buyukkoc, fail to cure the deficiencies of Dai, Moore and Buyukkoc as described above.

Accordingly, it is submitted that such rejected dependent claims define patentable subject matter for at least the reasons set forth above, as well as for the further features that such dependent claims recite.

C. Conclusion

For at least the reasons outlined above, Applicant respectfully asserts that the application is in condition for allowance. Favorable reconsideration and allowance of the claims are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

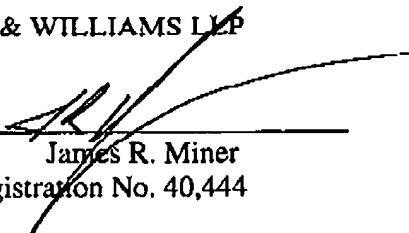
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For any fees due in connection with filing this Response the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

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